Product No. C 8666
Lot 095H4814

Monoclonal Anti-Calbindin-D
Mouse Ascites Fluid
Clone CL-300

Product Description
Monoclonal Anti-Calbindin-D (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Calbindin-D (28 kDa) purified from chicken gut was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Reagents
The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Specificity
Monoclonal Anti-Calbindin-D reacts specifically with calbindin-D in brain and kidney tissue from human, monkey, rabbit, rat, mouse, chicken, hamster, sheep, guinea pig and fish. The antibody stains the $^{45}$Ca binding spot of calbindin-D (MW = 28,000, pI = 4.8) in a two-dimensional immunoblot. In an RIA the antibody measures calbindin-D with a sensitivity of 10 ng/tube and an affinity of 1.6 x 10^{10} L/mole.

Working Dilution
A working dilution of 1:200 was determined by indirect immunoperoxidase staining of formalin-fixed, paraffin-embedded sections of animal tissue using the Mouse ExtrAvidin® Peroxidase Staining Kit (Product Code EXTRA-2).

In order to obtain best results, it is recommended that each individual user determine their optimum working dilution by titration assay.

Description
Calcium binding proteins represent a family of small acidic proteins equipped with peculiar cavities which accept Ca$^{+}$ with high selectivity. There are two types of calcium binding proteins, "trigger" and "buffer". Those of the "trigger" type (e.g. calmodulin and troponin-C) act by changing shape upon binding to calcium. This distortion exposes regions on the surface of the protein, which interact with surrounding target molecules altering their activity. The calcium binding proteins of the "buffer" type are conceived as a system which is in charge of controlling the calcium concentration inside certain cells. Calbindin-D occurs only in a subset of neurons and in a few other tissues, where it may confer to these cells peculiar skills in the handling of calcium ions.

Storage
For continuous use, store at 2-8 °C. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Sigma warrants that its products conform to the information contained in this and other Sigma publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice of packing slip for additional terms and conditions of sale.